

# FinTech Working Papers

## Financial advice and robo advice in the investors' perception

Evidence from a qualitative study

*M. Caratelli, C. Giannotti, N. Linciano, P. Soccorso*



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# Financial advice and robo advice in the investors' perception

Evidence from a qualitative study

*M. Caratelli\**, *C. Giannotti\*\**, *N. Linciano\*\*\**, *P. Soccorso\*\*\**

## Abstract

The ongoing institutional debate wonders whether robo advice may potentially bridge the advice gap, by reaching both 'underserved' and 'excluded' investors, who are unable to fully access the service. The present work aims to investigate the factors that may trigger both potential and actual interest in robo advice, thus contributing to widen the segment of investors receiving personalised recommendations. The study analyses the qualitative evidence gathered from two focus groups and four in-depth individual interviews, all involving investors. The participants in the focus groups are, respectively, investors supported by a human financial advisor (i.e., making decisions after receiving a customised recommendation by a dedicated advisor) and individuals interacting with bank staff only (i.e., making decisions without the support of a dedicated advisor). Individual interviews involve four users of one of the main providers of automated advice services active in the Italian market. Overall, the study highlights that the perceived objectivity of the algorithm and the customer experience granted by a digital platform may trigger (or have already triggered) interest in robo advice, mainly among financially and digitally literate investors. However, the hybrid model is always preferred to the pure automation, as the interaction with a human advisor is deemed as valuable both on educational grounds and in the occasion of key phases of the investment (e.g., portfolio monitoring or market turmoil). Given the evidence of this qualitative study, therefore, the hybrid robo advice can potentially bridge the advice gap for the more sophisticated investors, to the extent that they are willing to accept technology developments. To our knowledge, this is the first qualitative study that contributes to the debate on the advice gap by providing food for thought important for consumer protection policies and educational initiatives.

JEL Classifications: D14, D18, G23, G41, G51, G53, K22.

Keywords: FinTech, digitalisation, *robo advice*, MiFID II, *focus group*, *in-depth interview*.

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## 1 Introduction and motivation

Characteristics and distribution channels of financial advice service are evolving rapidly under the impetus of both technological and regulatory innovations.

In particular, the application of technology to financial services has triggered the development of the automated advice (so-called robo advice), based on customised investment recommendations about financial instruments processed by algorithms and delivered via digital platforms. Although much more developed in the Anglo-Saxon countries, robo advice is moving its first steps also in Italy, according to the hybrid model combining human support with digital features either along the whole value chain or in one or a few phases of the value chain only (Lener, Linciano and Soccorso, 2019; for further details, see also Appendix 1).

At the regulatory level, the European framework for investment advice has evolved continuously. The Directive 2004/39/CE (Market in Financial Instruments Directive - MiFID) and the Directive 2006/73/CE implementing Directive 2004/39/EC included financial advice among the investment services, i.e. reserved activities subject to specific rules of conduct, which can be provided only by particular categories of subjects, such as - in the specific case - banks, investment firms, asset management company, as well as by financial advisors and financial advice firms (respectively, natural persons and legal entities pursuant to Articles 18-bis and 18-ter of the Consolidated Law on Finance). The MiFID II/MiFIR package (the Directive 2014/65/EU, Delegated Regulation (EU) 2017/565 supplementing Directive 2014/65/EU and related acts) further innovated the discipline by introducing, among the other things, the independent advice and by regulating the disclosure of the costs of the service. At the same time robo advice was explicitly mentioned in the Guidelines on certain aspects of the MiFID II suitability requirements published by the European Securities and Markets Authority (ESMA, 2018).

In the financial advice segment, there is a wide range of both 'underserved' investors and 'excluded' investors who are unable to access the service because they have low amounts to invest or low willingness to pay (so-called advice gap). Lack of trust may be another key deterrent to the demand for financial advice. In Italy, for example, it is estimated that only 20% of investors rely on professional support, while about 40% mainly turn to trusted persons such as friends, relatives and colleagues (so-called informal advice). Beyond distrust, the main deterrent to the demand for advice is the belief that no advice is needed when investing small amounts of money. Finally, among the investors relying on advice, most of them are not aware of the cost of the service and are not willing to pay for it (CONSOB, 2019). The cost disclosure envisaged by MiFID II might further discourage the demand for financial advice (for further details, see Appendix 1). The advice gap is widespread especially among less wealthy individuals (generally underserved by 'traditional' advice), less financially literate and among those who cannot evaluate the value of the service and are not willing to pay for it. Robo advice is often referred to as a phenomenon that may potentially bridge the advice gap, since it can typically be accessed at lower wealth thresholds and lower fees with respect to those set by a 'human' advisor, thus result-

ing attractive to investors willing to invest through a digital platform. The phenomenon has therefore assumed a certain importance in the institutional debate, in the awareness that the quality of the economic-financial choices of savers could benefit from a personalised and high-quality service (ESAs, 2015 and 2016; IOSCO, 2016 and 2017; ASIC, 2019; FCA, 2019a; Towers Watson, 2014; for further details see Appendix 1).

The present work aims to investigate the factors that may trigger both potential and actual interest in robo advice, thus contributing to widen the segment of investors receiving personalised recommendations.<sup>1</sup>

This work analyses the qualitative evidence gathered from two focus groups and four in-depth individual interviews, all involving investors. The participants in the focus groups are, respectively, investors supported by a human financial advisor (i.e., making decisions after receiving a customised recommendation by a dedicated advisor) and individuals interacting with bank staff only (i.e., making decisions without the support of a dedicated advisor). Individual interviews involve four users of one of the main providers of automated advice services active in the Italian market.

Both the focus groups and the in-depth interviews highlight the factors - including social and cultural ones - capable of stimulating or discouraging the demand for advice as well as the perceptions and attitudes that may anticipate the propensity of investors to use automated advice.

The evidence from the focus groups shows that investors, although not aware of robo advice, understand its main characteristics thanks to their familiarity with other automated services (including home-banking). At a first instance, the description of robo advice prompts negative associations driven by the fear of humans being replaced by machines. Nonetheless a minority of the interviewees, more open to innovation and interested in financial issues, declare themselves willing to experiment. In addition, once the main characteristics of the service are disclosed, investors (in particular more sophisticated individuals, used to online services) are able to identify certain elements that may encourage interest in robo advice: the accessibility at lower wealth thresholds and lower fees with respect to the 'human' advice; the user experience, i.e. the convenience of using the service remotely and of avoiding psychological pressures that are sometimes perceived in the interaction with a humans advisor or with the bank staff; the objectivity of the recommendation released by an algorithm; the continuous monitoring of the investment granted by the algorithm. The attractiveness of the digital service is however weakened by several factors: the fear of having to decide on one's own; the concern of losing control of the process also due to lack of self-confidence and low financial literacy; worries related to cyber-security and the use of personal sensitive data by the platform.

1 This work is part of a wider research on FinTech that CONSOB started in 2016, in collaboration with several Italian universities, with the aim of exploring opportunities and risks for investor protection and the financial system as a whole, related to the application of technological innovation to the provision of financial services. In particular, this document supplements Lener, Linciano and Soccorso (edited by, 2019).

With reference to the clients of the robo advisor, the most appreciated factors are partly overlapping with the perceptions and the opinions of the participants in the focus groups: the innovative nature of the automated service, especially in case of dissatisfaction with previous investment experiences with a human advisor; the objectivity of the algorithm and of the recommendation; the accessibility and the customer experience of the online platforms.

Finally, both the participants in focus groups and in-depth interviewees prefer the hybrid robo advice model, which combines the digital channel with the assistance of a human consultant. The possibility of interacting with a 'physical' professional in case of need reassures those who are not users of robo advice and allows those who are already users of robo advice to experience the novelty, without necessarily breaking up the pre-existing relationship with their intermediary.

Overall, the study highlights that the perceived objectivity of the algorithm and the customer experience granted by a digital platform may trigger interest in robo advice, mainly among financially and digitally literate investors. However, the hybrid model is always preferred to the pure automation, as the interaction with a human advisor is deemed as valuable both on educational grounds and in the occasion of key phases of the investment (e.g., portfolio monitoring or market turmoil). Given the evidence of this qualitative study, therefore, the hybrid robo advice can potentially bridge the advice gap for the more sophisticated investors, that are willing to accept technology developments.

To our knowledge, this is the first work that contributes to the debate on the advice gap, by providing food for thought important for consumer protection policies and educational initiatives. As a way of example, the appreciation of the objectivity of the algorithm may be a concern if it implies overreliance on a tool that can itself be flawed as it is developed by human operators (on this issue, although not specifically related to financial services, see European Parliament, 2020).

The study is structured as follows. The second Section traces market trends, the main regulatory developments and the main international experiences; the third Section details the research questions, the methodology used and the characteristics of the sample examined; the analysis of the evidence collected and the conclusions follow.

## 2 Financial advice and robo advice in the perception of investors: methodology, research questions and sample of the qualitative study

### 2.1 The research questions

In the ongoing institutional debate, it has been argued that robo advice could reach the wide range of underserved investors, potentially bridging the advice gap. At the same time robo advice may in itself be inadequate for certain groups of

investors (such as, for example, individuals with complex needs, with low financial knowledge, with low digital skills).

The present work adds food for thought to the debate by bringing evidence from a qualitative analysis of investors' views on automated advice, also in the light of their approach to management of their personal finances, investments and financial advice.

## 2.2 The methodology

The interest in robo advice and potential demand are well suited to be analysed through a qualitative study based on focus groups and in-depth interviews. A qualitative analysis appears indeed suitable for identifying the social and cultural factors that can affect perceptions and attitudes and, at the same time, anticipate propensities and behaviours related to a phenomenon that is still little known by Italian investors, such as robo advice (see Appendix 1). In other words, in order to study the potential demand for robo advice it is useful to sketch hypotheses on the determinants of the potential attitude or behaviour *ex post*, on the basis of qualitative evidence, rather than testing hypotheses defined *ex ante* on the basis of few data on a very small sample of users (for further information, see, among others, Curry et al., 2009; van Bavel and Dessart, 2018; Veltri et al., 2014).

The present study is grounded on two focus groups, which involved investors receiving advice and investors not assisted by a dedicated advisor but still interacting with the staff of their bank, respectively, and four individual interviews with the customers of a robo advisor. Both focus groups and in-depth interviews were conducted on the basis of a semi-structured questionnaire (also question-line henceforth), elaborated on the basis of the evidence reported in Lener, Linciano and Soccorso (edited by, 2019) and in the CONSOB Observatory (CONSOB, various years) and administered by trained interviewers (more in the following).<sup>2</sup>

In addition to the question-line, the interviewers used two descriptive information sheets related to, respectively, the characteristics of the automated advice and an example of a model portfolio that can be recommended by a robo advisor. These information sheets were used to encourage participants to freely communicate associations of ideas, experiences and emotions, according to the so-called 'think aloud task' methodology (van Bavel and Dessart, 2018).

In line with the literature, according to which the interpretation of the collected data must be accurate and go beyond the mere reporting of anecdotal evidence (van Bavel and Dessart, 2018), focus groups and in-depth interviews were conducted by a specialised team, composed of psycho-sociologists from the research institute Eumetra MR. Dialogues, answers and reactions were recorded and analysed separately by the Eumetra MR team and the authors of the present study, and dis-

2 Question-lines of focus group and in-depth interviews are available only in Italian.

cussed together only at a later stage, in order to reach the most neutral reading possible.

The use of a flexible tool such as the already mentioned question-line and the neutral approach of the interviewers have allowed to solicit participants to narrate their experiences, express their attitudes, beliefs and opinions freely, without 'anchoring' them to predefined reference schemes typical of other survey tools (such as standardized questionnaires used in surveys) and to the a priori of researchers. At the same time, the codified trace in the question-line avoid digressions from the theme of the investigation. In particular, the question-line touched the following topics: the approach to savings and money money-management; the approach towards investments; the demand for financial advice; the attitude towards robo advice.

With regards to savings, money management and investments, participants in focus groups and in-depth interviewees were encouraged to express perceptions, free associations of ideas and feelings associated with the words 'savings' and 'investments', in order to explore individual skills, habits and goals in personal finance management.

With the intent of grasping the factors that may determine, or discourage, the demand for financial advice, the investigation also deepened the knowledge and perception of the value of the service, expectations on the role of the advisor, the experience gained with professionals (either bank's staff or financial advisors), also in terms of the quality of the relationship, and willingness to remunerate the professional.

Finally, the knowledge of robo advice (also referring to channels and sources of information and to experiences from which it derives) as well as opinions, prejudices and beliefs about the service (respectively of investors who have already used it and those who do not use it) were investigated. Attention was also paid to the following profiles: expectations associated with automated advice, among both customers of robo advisor and customers of banks providing the service through non-digital channels; advantages and disadvantages that are associated with the interaction with a robo advisor (compared to a human advisor); conditions that can prompt the interest and availability to use a platform offering this service, in terms of both subjective situations of the investor and objective characteristics of the provider and of the service itself. Participants in focus groups were also shown an example of a model portfolio recommended by a robo advisor, to verify their appreciation and perceived usefulness.

## 2.3 The sample

The investigation, which took place between December 2018 and January 2019, involved a total of 20 individuals aged between 25 and 65 years, equally sampled by gender, marital status (both single and married with or without children) and type of employment (employees and freelancers). Subjects were selected by a third-

party specialised company. They were given vouchers to be spent online as an incentive to participation.<sup>3</sup>

The interviewees are familiar with the web navigation, the use of home banking and the use of the Internet for information gathering for their financial choices. They can be regarded as investors belonging to the so-called mass/upper mass clientele segment as their financial wealth ranges between 20 thousand and 50 thousand euros. This segment is potentially exposed to the risk of being underserved, because they are not very profitable for intermediaries and/or are characterized by low willingness to pay for financial advice.

The two focus groups (lasting about two and a half hours each), involving respectively eight and seven individuals, correspond to the following targets:

- i. investors supported by a dedicated financial advisor in their investment choices;
- ii. investors who are not assisted by a dedicated advisor, while interacting with an employee of a traditional bank for the purchase and sale of financial products.

Individual in-depth interviews (lasting between 45 and 60 minutes each) involved four customers of a robo advisor.

The segmentation of the sample into three groups identifies three categories of investors potentially different in terms of needs, approach to savings and investments, willingness to pay and propensity to use advice (either automated or not).

In order to take into account also the level of financial knowledge that may affect the attitudes and behaviours of savers and the demand for advice, the participants took a short test consisting of seven questions, inspired by the empirical evidence available at both national and international level (CONSOB, various years; Lusardi and Mitchell, 2008, 2009, 2011, 2014; Lusardi et al., 2010; van Rooij et al., 2011). On average, the proportion of correct answers reaches 60% among participants in focus group, while it spikes to 100% for the customers of robo advisors.

As for the attitude towards financial risk, interviewees generally report to be risk-averse, even if someone (in particular, among those supported by a dedicated advisor) refers a certain disposition towards financial choices giving a little thrill, or rather, a certain inclination to take a little more risk on a small part of their savings (according to an approach which is consistent with the so-called 'mental accounting').<sup>4</sup> As for the dimensions of financial risk, individual perceptions most frequently focus on the risk of capital losses, lower than expected result (so-called downside risk) and market risk.

3 Sampling criteria satisfy the need to select subjects with similar characteristics in terms of life cycle phase (and therefore age and household composition) and range of wealth. Literature and empirical research suggest, in fact, that individuals within the same group exhibit homogeneous socio-demographic characteristics and share backgrounds and experiences, to the benefit of interaction and dialogue (Dawson et al., 1993).

4 According to the mental accounting approach, individuals tend to classify wealth in different mental accounts (depending on origin, use and time horizon), and to take a different attitude (e.g. in terms of risk and savings propensity) depending on the reference account (Thaler, 1985).

## 3 Evidence from the focus groups

### 3.1 The approach to savings

Individuals participating in the focus groups were solicited to express opinions on the topics of the question-line mentioned in the previous Section. The first topic dealt with money-management and savings. The interviewees described themselves as *'prudent', 'organized', 'methodical', 'informed', 'careful'*; only a couple of individuals reported to be *'prone to spend'*. In line with these suggestions, the words most frequently associated with household budget management are *'attention', 'patience'* and *'future'*.

While savings make participants feel *'serene', 'safe', 'happy'*, the management of savings is associated with the most varied emotions. *'Tranquillity', 'hope', 'serenity', 'satisfaction', 'trust'* combine with *'angry', 'fear', 'dissatisfaction', 'resignation'* (especially among those not assisted by an advisor), as the reference scenario is perceived to be more and more uncertain and complex.

In general, although the interviewees state to have a satisfactory lifestyle, the sustainability of savings (sometimes explicitly defined in term of a percentage of perceived income) is conditioned to consumption priorities that may entail renunciations and compromises (*'we give up to restaurants, we prefer to have just a pizza and something, in the end, we can save'*).

The propensity to save seems to be greater among those participants with children, whose main objectives are to meet both immediate needs (*'extraordinary expenses for children are the order of the day'*) and long-term needs. Some people use forms of forced savings to curb the tendency not to control expenditure (*'I am a big spender and therefore I have joined a pension fund. That's my saving: they take it off my pay-check and I don't even see it'*).

There are many reasons for saving and investing: supporting children in their future planning (studies, home, marriage and so on); ensuring a good quality of life as the years go by and when the children have reached economic independence; allowing themselves some short-term consumption projects (for example, holidays and trips, especially between those who do not have children and singles); setting aside for precautionary purposes (i.e. to deal with emergencies and unforeseen events).

Overall, money management is careful and savings are perceived as important. In addition, respondents are able to identify their savings macro-objectives. However, there is no attitude towards systematic financial planning (with some exceptions among interviewees supported by a dedicated advisor), while the commitment to saving and saving goals vary according to personal circumstances and the phase of one's own life cycle.

### 3.2 The approach to investments

In order to ascertain the approach to financial investments, participants to the focus group were solicited to indicate the concepts they associate with the word 'investments'. The notions most frequently mentioned are 'medium-long term', 'long-term time horizon' (underlying the need to avoid short-sighted behaviour in financial choices), 'uncertainty' and 'risk' (in terms of possible losses and volatility), 'disclosure', 'transparency' and 'clarity'. In addition to these associations, reflecting also the level of financial literacy and the personal attitudes of participants, it seems generally acknowledged that investment risk must be evaluated also in function of one's own time horizon as well as of one's own goals and life cycle. However, some of the interviewees state that they are willing to take more risk with a small fraction of their portfolio, thus revealing a 'mental accounting' approach.

Among the emotions associated with investments, lack of trust is the most reported feeling (in particular among investors not assisted by a dedicated advisor) together with concerns about the economic outlook and possible markets downturns. 'concern', 'anger' and 'fear' are among the most recurrent words, although there are also references to 'satisfaction' and 'trust'.

Investment is often considered as a commitment, once again in line with a mental accounting approach: as for savings invested in mutual funds, for example someone told: '*(...) not having them on your current account psychologically gives you the idea that they are not disposable [i.e. once you have invested in the mutual fund] you should go and disinvest ...*'; 'you do not see them in your home banking, they are tied up... and you give up to spend them!'

The prompt liquidity of the investment is, however, very appreciated to the extent that many participants prefer the application of entry rather than exit fees as this makes them feel able to disinvest quickly and without penalties if needed.

Investors, whether assisted by a dedicated advisor or not, also perceive the investment as a form of protection of savings ('*certainly you cannot become rich with investments ... the important thing is to protect your capital*'). In most cases, therefore, the investment goal is capital protection, even if this sometimes entails unrealistic expectations.

Interviewees complain that there are no longer investment options granting a minimum return and that, in general, returns are very low and heavily taxed. Expected returns are very modest: it is now almost a '*nice to have*'. In addition, although longing for high returns, the majority of respondents are aware that higher portfolio performance implies higher risk, which some of them are willing to take on a small part of their portfolio (as a '*calculated risk*').

Participants generally exhibit a cautious approach in the wake of past negative experiences and are often aware that '*times have changed*'. They acknowledge that nowadays a professional support is needed, that one can no longer rely on tips by informed friends ('*it is no longer time to rely on luck*') and that trading online may not be an opportunity to reap profits.

Negative experiences may be due to the losses suffered in the early 2000s because of the so-called 'dot.com' bubble, when they used to tolerate more risk<sup>5</sup>, or to recent losses, due to unsuitable advice they received.

In short, the approach towards investments is generally precautionary, with capital protection being the main goal. The liquidity of investments is also of fundamental importance. Individuals are aware that higher expected returns are associated with a higher risk and that the level of risk to be taken must be related to one's own time horizon. Only a minority of investors exhibit an approach oriented to planning, as confirmed by the fact that goals are only generically identified (supporting children, ensuring a serene old age), being savings in itself the main reported goal (*'I do not have a goal ... I save what I can when I can ... I do not know what I will do ... I will see ...'*).

### 3.3 The demand for advice: incentives and deterrents

The third feature investigated in the present qualitative study is the individuals' approach towards financial advice. To this respect, there are some notable differences among the focus group of advised investors and the focus group of investors relying on a generic interaction with the bank staff.

Advised investors expect a good advisor to inspire trust, to act in their best interest (*'to me it is important that he/she recommends not only their products [of the bank]',* to be prepared and to act professionally.

Especially at the beginning, the relationship with the advisor may benefit from the reputation of the bank which the advisor works for (*'if it is too big to fail, I feel more comfortable'*), although empathy is the most important driver (*'perceived trust and gut feelings are very important'*), so as to make it problematic to switch to the professional that will replace the advisor at the time of his/her retirement.

Since relationship is based on trust, respondents prefer long-lasting relationships (from five to 15 years and over) and suffer from the professionals turn-over within banks.

In most cases, the advisor is the primary source of information and helps (more sophisticated) investors to read information documents. Someone, however, reads financial newspapers too and seeks additional information on the Internet (although with some difficulty), also to decide whether to follow the advice or not.

The level of satisfaction with one's own advisor is not homogeneous. The advisor is sometimes deemed to be a bit hasty (*'in my opinion, mine is a bit superficial, he makes it too easy: 'let's go, let's do it. I tell him: 'but it is my money, not yours!''*) or too cautious or to make ill-timed decisions.

5 Some interviewees (especially those who do not rely on a dedicated advisor) attribute their previous more 'aggressive' investment style to their young age and to their life cycle (*'in the 2000s I invested in the new economy... I traded stocks... then the stock exchange collapsed... but I was young and without children...'*).

Overall, professionals are considered to play a crucial role at all stages of the investment process. In particular, advisors are acknowledged an educational function both when choosing and when monitoring the investment as well as whenever an overview of market trends is needed in order to understand the implications for one's own portfolio.

When it comes to the investors not assisted by a dedicated financial advisor, opinions on the professionals are less positive. Interviewees associate to the word 'advice' concepts such as 'support', 'skills', 'transparency', 'guarantee', 'availability', but also 'conflict of interest' and 'incompetence'. The advisor is expected to be a discreet, prepared, honest, 'family man', who knows how to advise without being intrusive or trying to force solutions not shared by the client.

Overall, the propensity to make investment choices autonomously or to rely on informal advice is common. This couples with a widespread feeling of distrust towards the banking intermediaries, whose business model is perceived to have suffered from a negative evolution over time, as shown by the high turnover of the staff, considered increasingly unprepared and less and less attentive to customers.

### 3.4 Knowledge and perception of robo advice

The participants in the focus groups were asked to reflect on robo advice in three distinct phases of the interview, each corresponding to an increasingly wider set of information on the characteristics of the service available to them. In the first phase, they were provided a general definition of the service in order to elicit their spontaneous foreshadowing (Phase 1); in the second, a precise description of the features characterising robo advice was realised (Phase 2); in the third stage, participants' opinions were elicited after the presentation of an example of a model portfolio that may be recommended by a robo advisor (Phase 3).

In Phase 1 it emerged that no-one of the interviewees knows about robo advice. The expression robo advice generated some free associations with concepts such as: 'artificial intelligence', 'big data', 'algorithm', 'software', 'machine', 'app', 'engineering', 'home-banking', 'virtual chat', 'avatar', 'robot', 'virtual advisor' (meant as 'an advisor in your pocket').

Thanks to their experience with automated models of customer care and also leveraging on the imaginary relative to the technological evolution in progress, the interviewees grasp the core features of robo advice ('the robo advisor would collect all the information I would tell a bank advisor through a series of questions and would extrapolate the best product through an algorithm').

Overall, spontaneous foreshadowing reveals a certain ambivalence with respect to the prospect of a fully automated advisor, delivering recommendations through a digital platform on the basis of a software and automatically monitoring the performance of the portfolio.

Subjects open to innovation are willing to test the automated service provided by a robo, even if for some of them an essential condition is that the interaction with a human advisor is foreseen. A minority of individuals, belonging to both focus groups, who are more '*passionate*' and curious about financial issues and have sometimes acted as self-directed investors, report to be willing to experiment with a limited sum of money and without giving up to the traditional service, in line with a logic of diversification of providers.

On the other hand, people expressing feelings of complexity, anxiety, and detachment refer 'robo advice', semantically, to a very futuristic concept, which evokes the negative idea of the substitution and prevarication of the machine over the man.

In Phase 2, both groups were summed up with a definition of robo advice based, among the others, on the following constituent elements: access to the service through an online platform; lower investments thresholds and lower costs compared to those of the traditional channel; the elaboration of the investment recommendation by an algorithm, on the basis of the information provided by the client; the investment options mainly represented by model portfolios, which mainly include passive products such as ETFs; the extent of automation of the service, ranging from total automation (pure robo advice) to partial automation (hybrid robo advice).

Again, the attitude towards robo advice turns out to be sensitive to two features: the reputation of the provider and the possibility of interacting with a human expert if needed.

As for the reputation of the provider, most interviewees would approach robo advice if it were offered by their own bank or, in any case, by a high-reputation banking group/a financial operator. Within the group of investors not relying on a dedicated advisor, some participants doubt about the soundness of a start-up, preferring rather an entity with a consolidated reputation in the financial system ('*an important brand (...), a big bank*'). Some interviewees would trust the so-called GAFA (Google, Apple, Facebook and Amazon) perceived as operators capable of opening up new frontiers in financial services, while others (especially those with greater skills and investment experience) state that they could never trust '*these giants*'.

As for the interaction with a human advisor (at least in the initial phase of the investment decision), most respondents require it is a necessary condition to invest with a robo advisor. Consistently with the spontaneous foreshadowing emerged in Phase 1, at a first instance the idea of a robo advisor prompts concerns for the relationship among human customers and a robo. Only in a second step, investors focus their attention on the characteristics of the service in terms of accessibility and cost. It is not surprising, therefore, that all the interviewees (including the most sophisticated and/or those most disillusioned by their previous experiences with a human advisor) take into consideration only the hybrid model, while the pure model is perceived as a too strong discontinuity with respect to the current relational standard. The hybrid model however does not grant a single point of reference, but rather the support from a team of professionals who can alternate in the style of a

call center operators. This feature is not appreciated by those who prefer a stable relationship (as those who complain with the high turnover in bank staff, as mentioned above).

In spite of the concerns referring to the relationship model, some respondents among the most sophisticated investors pinpoint some benefits from automation, such as the objectivity and the rationality of the recommendations processed by an algorithm, which in turn grants a continuous monitoring of investments.

As at the end of Phase 1, also in Phase 2 (when a description of robo advice is provided) respondents express ambivalent opinions, which may either disengage or fuel the interest in the digital service.

The third phase (Phase 3), as already mentioned, consisted in the presentation of an example of a model portfolio that might be recommended by a hypothetical robo advisor to a hypothetical investor holding less than 50 thousand euros of financial assets. While maintaining overall ambivalent opinions, participants begin to delve deeper into the accessibility and the user experience granted by the digital service.

Some respondents perceive the example of model portfolio as too complex and confirm their concerns about the fact that relying on a robo advisor entails the ability of deciding alone, without any support. Other respondents appreciate the objectivity of the advice and declare themselves willing to explore it by investing small amounts of money at least in a first stage. In particular, the '*objectivity*' and the '*reliability*' of the automated advice results from an algorithm that in addition ensures a continuous monitoring of their portfolio (*'I like it! Costs are low, mechanization gives me confidence, I have more time to think about it. The software suggests me to rebalance. There is an added value for a lower cost.'*; *'For the human advisor I'm just a number; a human advisor can't waste time with me'*; *'I like it! It allows me to diversify. I would try step by step, to become familiar. When I feel strong, I can decide to invest with a robo advisor only'*).

The possibility of accessing the service even with a limited amount of money is appreciated too (*'another positive aspect is that I can start with a low capital'*), to the extent that some people recall the concept of the '*democracy*' of the service. With the exception of a few participants, however, interviewees are neither able to grasp the possible parameters for calculating the fee of a robo advisor nor to appreciate the fact that automation and the use of passively managed products can result in a lower cost than the advice provided through non-digital channels.

An additional feature judged as valuable in a robo advisor is the opportunity to use the service without those time and logistic constraints characterising the traditional service. The interaction with a digital platform allows the customers to take their time when evaluating the advice received avoiding the psychological pressure which may be felt in the interaction with human advisors (*'in the bank you have half an hour to decide whether to subscribe or not. Here instead you are at home, on Sunday, and you can see ... evaluate... maybe do nothing, come back the next day'*). Finally, some participants, especially those not assisted by advisors or disappointed

by previous experiences, appreciate the opportunity to invest in products issued by parties other than the bank of reference.

Overall, once the initial resistance has been overcome, the expectation that technological innovation might ensure better advice prevails. Further discussion, however, highlights cybersecurity and potential misuse of sensitive data as factors that may discourage some respondents from relying on a robo advisor.

The opinions collected during the three Phases related to the automated advice and analysed so far can be referred to three levels of assessment: attitudinal, emotional and rational/functional, respectively. The attitudinal assessment is positive in most cases: interviewees express curiosity and openness (which does not mean real interest) and show willingness to evaluate innovation. The emotional assessment tends to balance the appreciation of the objectivity of the automated advice with the negative feelings led by the lack of a stable and empathic human relationship, the perception of being forced to decide autonomously, and the anxiety grounded in one's own low financial competence. The rational/functional assessment prompts technological acceptance and feeds the perception of reliability and convenience of robo advice, especially among the most sophisticated investors.

## 4 Evidence from in-depth interviews

In-depth interviews involved four investors, users of one of the main providers of automated portfolio management services active on the Italian market

The interviewees exhibit homogeneous features in terms of socio-demographics and life cycle phase. They are aged between 25 and 45 years and hold a high socio-economic profile (being, respectively, a freelance journalist, a university lecturer, a graduated in medicine, a professional in digital innovation). Three interviewees declare a low propensity to risk, while the fourth one claims to be willing to take risk.

Respondents do not evaluate themselves as high financially literate - even though they recorded excellent results in the test mentioned in paragraph 2.3 - nor do they consider themselves as expert investors. However, they are curious and interested in understanding which investment option is best suited to their needs and in making informed decisions without relying blindly on their advisor. Finally, all the interviewees feel the need to invest their savings over a medium-long time horizon (3-5 years), although for different needs (for example, future expenses for children, retirement, use of resources previously allocated to the repayment of a mort-gage).

Among the elements that have oriented the four investors to use the services of an automated advisor (no one speaks of 'robo advisor') the generational and cultural attitude towards innovation results key together with the need to proactively manage one's own financial resources. The search for innovative, effective and personalised methods orientates towards the digital world in several areas (*'I'm used to*

*doing everything online, including shopping*') and the service provided by an innovative start-up is attractive because of its intrinsic characteristics.

Secondly, the approach to automated advice responds to the need to seek for solutions alternative to the traditional model. All interviewees continue to rely on a traditional intermediary, whose functionality and effectiveness are put into question on several grounds, such as the cost, the usability and the accessibility of the service. Robo advice is appreciated because of its low fees, while operating online and interacting remotely with the advisor are more attractive than going to the bank-branch to meet the professional (this is '*tiring*'). In addition, the clearness of the platform and of the service model also feeds the perception of a transparent advice, which makes it easy to understand the service received and allows to make an informed choice.

Reliance on the robo advisor is also driven by a preference towards the 'mechanistic' of the algorithm and the standardization of the model portfolios, both contrasting with the 'discretion' of the professional. This latter, indeed, may not act in the best interests of the customer either by mistake or because of lack of competence or because driven by biased incentives.

The standardization of both service and model portfolios makes the digital service credible and fosters customer confidence. This effect could also be linked to the fact that being characterised by a simplified choice set (as only a small number of standardised portfolio models are envisaged as investment options), a robo advisor mitigate the risk of the so-called 'choice overload' and accommodate the individuals' propensity to avoid the complexity of a decision-making process entailing a too high number of options (Chernev et al., 2015).

In spite of the deep appreciation of the automated features of a robo advisor, all interviewees keep valuing the 'human touch'. They have indeed chosen a hybrid model, offering the possibility of interacting with human advisors when needed. The features of the robo advisor's team are key too, as shown by the fact that interviewees really enjoy being on the same wavelength as the team members (same generation, same language and so on).

## 5 Conclusions

The present qualitative study allows to draw interesting conclusions about the propensity to ask for financial advice, in general, and for robo advice, in particular.

As for the perception of the value of financial advice in general, participants to focus groups would like a deeper and more stable interaction with their human advisor or with the bank staff, as highlighted by their complaints about advisors/bank-staff turnover and the difficulties related to the choice of the expert to turn to. In addition, among investors not relying on a dedicated advisor, elements that negatively affect the perception of the service are the low quality/low compe-

tences of the bank staff, the lack of customization of the advice received, the occasional nature of the relationship.

As for factors underlying the propensity towards automated advice, at the attitudinal level interviewees reveal a certain degree of openness towards technological developments with the exception of non-advised investors (as they are reluctant to provide the platform with information about their financial situation, their objectives and their preferences for risk).

With regard to the emotional factors, the perceived objectivity of the automated advice is highly valued although the possibility of interacting with a professional team reassures those who already rely on a hybrid robo advisor as well as potential customers, although it is not always sufficient to overcome the anxieties of investors who still rely on traditional intermediaries only. These latter show a strong affection for the human relationship, valuing the support of the professional both at the beginning of the relationship and in the negative phases of the market. In other words, the so-called 'human touch' continues to have a significant weight, even among investors disappointed by previous experience with traditional intermediaries. Human interaction therefore remains a critical success factor (which in perspective could be increasingly valued - also in communication - by current providers of online financial services).

Concerns about '*having to do it myself*', as already said, discourages the use of robo advice and at the same time reveals a lack of knowledge of the regulatory framework that protect investors receiving (either human or robo) advice.

Among functional and rational factors, usability and the accessibility of the service is widely appreciated by all participants (both in focus groups and in-depth interviewees), while the cost of service is clearly perceived as a success factor only by the users of the digital service. The remaining investors do not perceive cost as a discriminating element between a human advisor and a robo advisor. This may be due to a lack of knowledge of the characteristics of the robo advice or to a limited perception of the costs of the traditional service (which in many cases is considered to be free of charge, see CONSOB, different years). In this regard we may expect that the application of MiFID II requirements about costs disclosure will stimulate greater consideration of the cost of the service, which could become one of the relevant factors in the choice of the advisor.

Finally, while dissatisfaction for the interaction with traditional intermediaries is among the most important driver of the demand for robo advice for participants to the in-depth interviews, the same does not hold true for participants in focus groups. This difference might be due also to the higher propensity towards innovation and to the more pronounced attitude to shopping around exhibited by customers of robo advice compared to customers of traditional intermediaries.

Overall, the study highlights that the perceived objectivity of the algorithm and the customer experience granted by a digital platform may trigger interest in robo advice, mainly among financially and digitally literate investors. However, the hybrid model is always preferred to the pure automation, as the interaction with a

human advisor is deemed as valuable both on educational grounds and in the occasion of key phases of the investment (e.g., portfolio monitoring or market turmoil). Given the evidence of this qualitative study, therefore, the hybrid robo advice can potentially bridge the advice gap for the more sophisticated investors, to the extent that they are willing to accept technology developments.

The study provides further evidence of interest also for possible implications in terms of consumer protection in general and financial education in particular. As for the decision-making process, the analysis confirms the key role of heuristics such as trust in the financial system, the propensity to mental accounting and to the disposition effect (i.e. the tendency to keep losing securities in one's own portfolio for too long and to sell the winners too early). Although the importance of saving and cautious management of personal finances is understood, respondents show little inclination to a structured financial planning. In addition, lack of knowledge of the advice service is common among less literate respondents. In this context, the educational role of the financial advisor (either human or automated) is acknowledged and required by most of the interviewees.

To our knowledge, this is the first qualitative study that contributes to the debate on the advice gap, by providing food for thought important for consumer protection policies and educational initiatives. As a way of example, the appreciation of the objectivity of the algorithm may be a concern if it implies overreliance on a tool that can itself be flawed as it is developed by human operators.

## References

- ASIC - Australian Securities and Investments Commission (2016), Regulatory Guide 255, Providing digital financial product advice to retail clients
- ASIC - Australian Securities and Investments Commission (2019), Financial advice: mind the gap, Report 614, March 2019
- Assoreti (2019), Relazione annuale 2018
- Atrigna, T. (2012), Commento sub art. 1, co. 5-septies, in Testo Unico della Finanza, Tomo I, edited by M. Fratini e G. Gasparri, Torino, Utet
- Bachmann, K. and T. Hens (2014), Investment competence and advice seeking, Working Paper
- Benartzi, S. and R.H. Thaler (1995), Myopic Loss Aversion and The Equity Premium Puzzle, Quarterly Journal of Economics, 110, pp. 73-92
- Benartzi, S. and R.H. Thaler (2001), Naive Diversification Strategies in Defined Contribution Saving Plans, in American Economic Review, 91, pp. 79-99
- BlackRock (2016), London Stock Exchange Seminar, 13 October 2016, Milan
- Bluethgen, R., A. Gintschel, A. Hackethal and A. Müller (2008), Financial Advice and Individuals Investors' Portfolio, disponibile al link: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=968197](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=968197)
- Bucher-Koenen, T. and J. Koenen (2015), Do seemingly smarter consumers get better advice? (February 26), Max Planck Institute for Social Law and Social Policy Discussion Paper No. 01-2015, URL: <http://ssrn.com/abstract=2572961> or <http://dx.doi.org/10.2139/ssrn.2572961>
- Burnmark (2017), Digital wealth, April 2017
- Calcagno, R. and C. Monticone (2013), Financial literacy and the demand for financial advice, Journal of Banking and Finance, 50, pp. 363-380
- Chernev, A., U. Böckenholt and J. Goodman (2015), Choice overload: A conceptual review and meta-analysis, Journal of Consumer Psychology, 25 (2), pp. 333-358
- Collins, M.J. (2012), Financial advice: A substitute for financial literacy?, in Financial Services Review, 21, pp. 307-322

- CONSOB (anni vari), Rapporto sulle scelte di investimento delle famiglie italiane, <http://www.consob.it/web/area-pubblica/report-famiglie>
- CONSOB, Università degli Studi Roma Tre, OCF - Organismo di vigilanza e tenuta dell'albo unico dei consulenti finanziari, FINER (2018), La relazione consulente-cliente, Addendum al Rapporto sulle scelte di investimento delle famiglie italiane, [http://www.consob.it/documents/46180/46181/intervento\\_caratelli\\_20181022.pdf/217874d3-2e0a-428d-a567-61dd95bf2881](http://www.consob.it/documents/46180/46181/intervento_caratelli_20181022.pdf/217874d3-2e0a-428d-a567-61dd95bf2881)
- CONSOB, Università degli Studi Roma Tre, OCF - Organismo di vigilanza e tenuta dell'albo unico dei consulenti finanziari, GfK Eurisko (2017), La relazione consulente-cliente, Addendum al Rapporto sulle scelte di investimento delle famiglie italiane
- CSA - Canadian Securities Administrators (2015), Staff Notice 31-342 Guidance for Portfolio Managers Regarding Online Advice
- Curry, L.A., I.M. Nembhard and E.H. Bradley (2009), Qualitative and mixed methods provide unique contributions to outcomes research. *Circulation*, 119(10), pp. 1442-1452
- Dawson, S., L. Manderson and V.L. Tallo (1993), A manual for the use of focus groups, *Methods for social research in disease*, International Nutrition Foundation for Developing Countries (INFDC), Boston, MA, USA
- de Mari, M. (2008), La consulenza in materia di investimenti: prime valutazioni e problemi applicativi, in *Diritto della banca e del mercato finanziario*, I, pp. 393 e ss.
- Debbich, M. (2015), Why financial advice cannot substitute for financial literacy?, Banque de France Working Paper
- ESAs - European Supervisory Authorities - Joint Committee (2015), Discussion Paper on automation in financial advice, JC 2015 080, 4 December 2015
- ESAs - European Supervisory Authorities - Joint Committee (2016), Report on automation in financial advice, JC SC CP FI/2016/24, 3 November 2016
- ESMA - European Securities and Markets Authority (2018), Orientamenti su alcuni aspetti dei requisiti di adeguatezza della MiFID II, 06/11/2018 | ESMA35-43-1163 IT, [http://www.consob.it/documents/46180/46181/esma35\\_43\\_1163.pdf/0594bad-d-e955-4338-9b41-b3104da0fbf2](http://www.consob.it/documents/46180/46181/esma35_43_1163.pdf/0594bad-d-e955-4338-9b41-b3104da0fbf2)
- European Parliament (2020), Draft motion for a resolution further to Question for Oral Answer B9- /2019 pursuant to Rule 136(5) of the Rules of Procedure on Automated decision-making processes: Ensuring consumer protection, and free movement of goods and services, 2019/2915(RSP)
- FCA - Financial Conduct Authority (2019a), Evaluation of the Retail Distribution Review and the Financial Advice Market Review. Call for input, May 2019

- FCA – Financial Conduct Authority (2019b), Investment platforms market study. Final report, MS17/1.3, March 2019
- FCA – Financial Conduct Authority (2019c), Business Plan 2019/20
- Ferguson, B. (2017), *Robo advice: an FCA perspective*, Speech by Bob Ferguson, Head of Department, Strategy & Competition Division, Financial Conduct Authority
- Filotto, U. (edited by, 2014), *La banca diretta. Comportamenti e aspettative dei clienti tra banca online e banca tradizionale*, Bancaria Editrice
- Filotto, U. and P. Mottura (2013), *Quando le banche saranno dirette?*, *Bancaria*, 10, pp. 2-18
- Finametrica (2015), *The Robo Revolution, Robo advice market commentary and analysis a cura di P. Resnik e S. Erskine*, November
- FINRA – Financial Industry Regulatory Authority (2016), *Report on Digital Investment Advice*, March 2016
- FMA – New Zealand Financial Markets Authority (2018), *Financial Advisers (Personalised Digital Advice) Exemption Notice*
- Guffanti, E. (2011), *Il servizio di consulenza: i confini della fattispecie*, in *Società* pp. 555 e ss.
- Hackethal, A., M. Haliassos and T. Jappelli (2012), *Financial Advisors: A case of babysitters?*, *Journal of Banking and Finance*, 36(2), pp. 509-524
- Ignition House e Critical Research (2018), *The changing shape of the consumer market for advice: Interim consumer research to inform the Financial Advice Market Review (FAMR)*, August 2018
- IOSCO – International Organization of Securities Commissions (2016), *Final Report, Update to the Report on the IOSCO Automated advice tools survey, FR15/2016*, December 2016
- IOSCO – International Organization of Securities Commissions (2017), *Research Report on Financial Technologies (Fintech)*, February 2017
- Krueger, R.A. (1994), *Focus group. A Practical Guide for Applied Research*. London–Beverly Hill Sage
- Lener, R., N. Linciano and P. Soccorso (a cura di, 2019), *La digitalizzazione della consulenza in materia di investimenti finanziari*, Gruppo di lavoro CONSOB–Scuola Superiore Sant’Anna di Pisa–Università Bocconi–Università di Pavia–Università di Roma ‘Tor Vergata’–Università di Verona, Quaderni FinTech, CONSOB
- Lusardi, A. and O.S. Mitchell (2008), *Planning and financial literacy: how do women fare?*, *American Economic Review*, 98(2), pp. 413-417
- Lusardi, A. and O.S. Mitchell (2009), *How ordinary consumers make complex economic decisions: financial literacy and retirement*, NBER WP no. 15350

- Lusardi, A. and O.S. Mitchell (2011), Financial literacy and planning: implications for retirement well-being, in *Financial literacy: implications for retirement security and the financial marketplace*, 17-39, edited by O.S. Mitchell and A. Lusardi, Oxford and New York: Oxford University Press
- Lusardi, A. and O.S. Mitchell (2014), The economic importance of financial literacy: theory and evidence, *Journal of Economic Literature*, 52(1), pp. 5-44
- Lusardi, A., O.S. Mitchell and V. Curto (2010), Financial literacy among the young, *Journal of Consumer Affairs*, 44(2), pp. 358-380
- NMG Consulting (2014), The motivations, needs and drivers of non-advised investors. A qualitative research report, <https://www.fca.org.uk/publication/research/non-advised-investors-research-paper.pdf>
- Oprandi, N.C. (2000), *Focus group*. Breve compendio teorico-pratico, emme&erre libri
- Paracampo, M.T. (2016), Robo advisor, consulenza finanziaria e profili regolamentari: quale soluzione per un fenomeno in fieri?, in *Rivista trimestrale di diritto dell'economia*, pp. 256 e ss.
- Paracampo, M.T. (2018), L'adeguatezza della consulenza finanziaria automatizzata nelle linee guida dell'ESMA tra algo-governance e nuovi poteri di supervisione, *Rivista di Diritto Bancario*, n. 8, pp. 1-12, [http://www.dirittobancario.it/sites/default/files/allegati/m.t.\\_paracampo\\_ladeguatezza\\_della\\_consulenza\\_finanziaria\\_automatizzata\\_2018.pdf](http://www.dirittobancario.it/sites/default/files/allegati/m.t._paracampo_ladeguatezza_della_consulenza_finanziaria_automatizzata_2018.pdf)
- Sabatini, D. (2012), La relazione Banca-Investitore: cambiamenti in atto e prospettive future, intervento al Convegno 'Conoscere l'investitore: la rilevazione della tolleranza al rischio finanziario', Roma, 23 novembre 2012
- Sciarrone-Alibrandi, A. (2009), Il servizio di 'consulenza in materia di investimenti': profili ricostruttivi di una nuova fattispecie, in *Diritto della banca e del mercato finanziario*, pp. 383 e ss.
- SEC - Securities and Exchange Commission (2016), FinTech Forum. The evolving financial marketplace della Securities and Exchange Commission, 14 November 2016 Transcript, <https://www.sec.gov/spotlight/fintech/transcript-111416.pdf>
- SEC - Securities and Exchange Commission (2017), Guidance Update, February 2017, n. 2/2017
- Sfameni, P. and A. Giannelli (2015), *Diritto degli intermediari e dei mercati finanziari*, Milano, Egea
- Sist, F., C. Giannotti and M. Caratelli (2017), La consulenza finanziaria nel nuovo scenario: il contributo del digitale e del Fintech, *Bancaria*, 11, pp. 72-79
- Thaler, R.H. (1981), Some Empirical Evidence on Dynamic Inconsistency, *Economic Letters* 8, pp. 201-207
- Thaler, R.H. (1985), Mental Accounting and Consumer Choice, *Marketing Science*, 4(3), pp. 199-214, disponibile al link: <http://www.jstor.org/stable/183904>

Towers Watson (2014), Advice Gap Analysis: Report to FCA

van Bavel, R. and F.J. Dessart (2018), The case for qualitative methods in behavioural studies for EU policy-making, JRC Science for Policy Report, Joint Research Centre

van Bavel, R., N. Rodríguez-Priego and I. Maghiros (2015), Seven Points to Remember when Conducting Behavioural Studies in Support of EU Policy-making, Joint Research Centre

van Rooij, M., A. Lusardi and R. Alessie (2011), Financial literacy and stock market participation, *Journal of Financial Economics*, 101(2), pp. 449-472

Veltri, G.A., J. Lim and R. Miller (2014), More than meets the eye: The contribution of qualitative research to evidence based policy making, [Editorial] *Innovation*, 27(1), pp. 1-4